SAWTOOTH FISH HATCHERY AND
EAST FORK SATELLITE

1986 Spring Chinook and Brood Year Report
and
1987 Steelhead Brood Year Report

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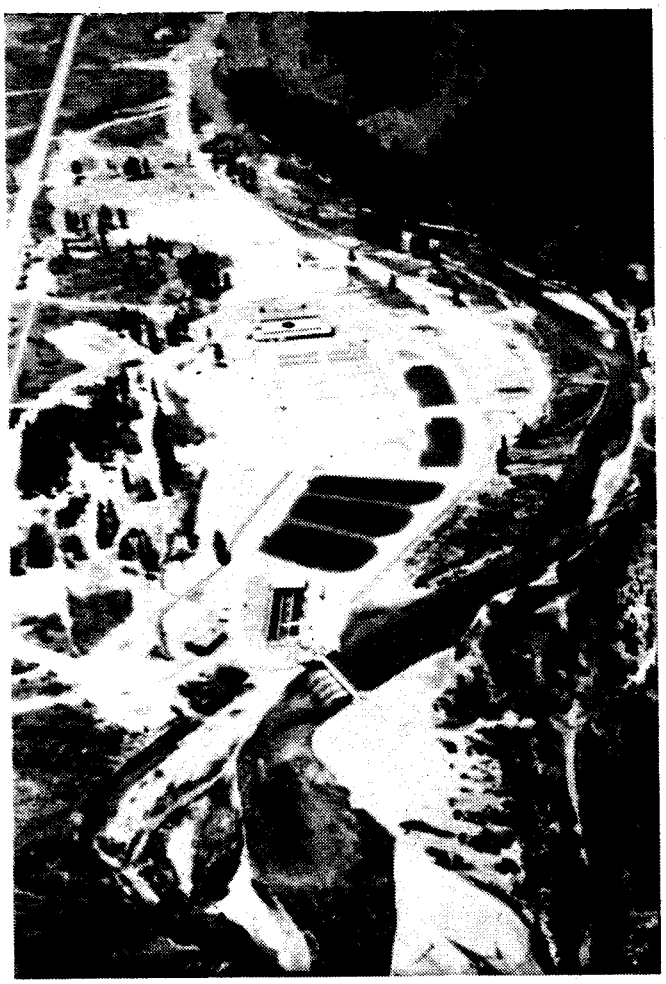

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HATCHERY DESCRIPTION

Sawtooth Fish Hatchery is part of the Lower Snake River Compensation Plan and has been in operation since 1985. Mitigation goals are for 2,400,000 spring chinook smolts and 4,500,000 steelhead eggs which are to be reared at Hagerman National and Magic Valley hatcheries. A satellite station located on the East Fork of the Salmon River includes trapping, holding, and spawning facilities for salmon and steelhead.

Sawtooth Hatchery receives its water from the Salmon River and three production wells. The wells provide 7.8 cfs and maintain a minimum temperature of 40°F in winter and up to 50°F during the latter part of the summer. The river provides up to 55 cfs of water, with temperature variations from 32°F to 68°F. Rearing water from the river enters an intake structure located one-half mile upstream from the hatchery building and runs through a 54-inch pipe to a control box located in the hatchery building, where final screening is accomplished. Water is then distributed to the indoor vats, outside raceways, or adult fish facility. Incubation water is provided by two production wells or river water. Back-up to the incubators is gravity flow river water through a check valve from the control box. Inside vats may utilize either well or river water or both, with excess well water spilled back into the control box for use in the outside raceways.

Production facilities include: 100 stacks of FAL incubators containing 800 trays; 16 indoor rearing vats, each with 400 cubic feet of rearing space; 12 outside fry raceways, each with 750 cubic feet of rearing space; and 28 final rearing raceways, each with 2,700 cubic feet of rearing space. The lower sections of the final rearing raceways have serial re-use water from the top sections. The adult fish facility consists of a weir, fish trap, three adult holding ponds, each with 4,500 cubic feet of holding area; and a spawning area located at the upper end of the holding ponds.

1986 SPRING CHINOOK RETURN

Returning adults to Sawtooth Hatchery in 1986 resulted from smolt releases in 1983 and 1984 and jacks returning from the 1985 release (Table 1).

Table 1. Sawtooth Hatchery smolt release and adult return, 1986.

Brood year	Release year	Number released	Adult returns				Total Percent
			Jacks	2-ocean	3-ocean	returns[a]	
1979	1981	None			291	INC[b]	
1980	1982	None	17	66	165	248	
1981	1983	186,375	49	1,182	796	2,027	1.08
1982	1984	230,550	292	922	875	2,089	.91
1983	1985	420,060	51	452			
1984	1986	347,484	17				
1985	1987	1,185,061					
1986	1988	1,705,500					

[a]Includes an unknown number of wild fish.
[b]INC - incomplete.

The Sawtooth fish weir and trap was put into operation on June 20, 1986 and was operated through September 9, 1986. The trap was checked daily and fish transferred to the adult holding ponds or released upstream of the weir to spawn naturally. All fish were measured, and length frequency data is provided in Table 2. A total of 1,769 chinook were trapped, including 1,043 males (51 jacks) and 726 females. Four hundred fifteen males and 478 females were held for spawning, while the remaining 628 males and 248 females were released above the weir. Ponded fish were injected with erythromycin phosphate at a dosage rate of 5 mg for each pound of fish weight to help control kidney disease (BKD).

Trapping of chinook salmon at the East Fork facility began on May 27, 1986 and ended on September 9, 1986. The trap was checked daily, and the fish were transferred to the holding ponds or released above the velocity barrier to spawn naturally. A total of 194 salmon were trapped, including 115 males (5 jacks) and 79 females. All returning adults were the result of natural escapement.

Fourteen males and 54 females were held for spawning, and 101 males and 25 females were released to spawn naturally. Some males were used for spawning, then released.

Table 2. Length frequency distribution for Sawtooth and East Fork spring chinook adults, 1986.

Length		Sawtooth	East Fork	
inches	cm	numbers	numbers	Total
15	38	7	1	8
16	41	7	0	
17	43	9	0	9
18	46	15	1	16
19	48	6	2	8
20	50	7	1	8
21	53	4	2	6
22	55	4	2	6
23	58	18	0	18
24.	60	10	5	15
25	63	27	2	29
26	66	49	4	53
27	68	66	9	75
28	71	126	17	143
29	73	185	12	197
30	a6	233	17	250
31	78	200	17	217
32	81	181	13	194
33	83	163	6	169
34	86	112	9	121
35	88	86	12	98
36	91	92	19	111
37	93	71	22	93
38	96	48	9	57
39	99	26	3	29
40	101	12	8	20
41	104	5		
Totals		1,769	194	1,963

ADULT SPRING CHINOOK CODED WIRE TAG RECOVERIES

Adult spring chinook were examined for fin clips and tags. Of the 1,769 fish trapped, 427 contained coded wire tags. Tag recovery data is summarized in Table 3.

Table 3. Sawtooth coded wire tag recoveries from adult spring chinook, 1986.

Tag code	Brood year	Release year	Tags released	Tags recovered	Group release
10-24-08	1981	1983	35,075	15	167,895
10-25-35	1981	1983	51,450	9	167,895
10-27-08	1982	1984	51,025	218	230,550
10-27-09	1982	1984	50,600	183	230,550
10-26-35	1983	1985	38,150	2	420,060
10-26-34	1983	1985	41,200	0	420.060

PRESPAWNING MORTALITY

Prespawning mortality included all females which died before spawning and all males which died until the end of the second week of spawning. Of the 415 males and 478 females ponded at Sawtooth, 52 males (12.51) and 115 females (24X) died from various causes prior to spawning. Two males and four females died at the East Fork facility prior to spawning.

CHINOOK SPAWNING

Spawning operations began at Sawtooth on July 28 and continued on a biweekly basis through September 8, 1986. A total of 360 females were spawned for a green egg take of 2, 035, 535, an average of 5,654 eggs per female.

East Fork spawning began on July 28 and continued biweekly through August 28, 1986. A total of 48 females were spawned for a total of 300,438 green eggs, an average of 6,259 eggs per female.

Females were spawned using the incision method. Eggs were collected in a colander to drain off the ovarian fluid. Eggs from three females were placed into a spawning bucket and fertilized with the pooled sperm from five males. Males utilized for spawning included jacks. The fertilized eggs were allowed to set for three minutes with one cup of well water added, rinsed once in well water, then water hardened in 100 ppm buffered Argentyne for one hour.

CARCASS DISPOSITION

Sawtooth and East Fork salmon carcasses were checked for kidney disease lesions, snouts removed from marked fish, and then buried at a landfill. No fish were given to the general public.

CHINOOK EGGS

After fertilization and water hardening, the eggs were placed into the incubator at 85 ounces per tray or approximately 8,500 eggs per tray. The incubation water was set at a flow of 5 gpm per stack. Incubation water temperatures ranged form a high of 50 degrees F to 43 degrees F. Green eggs were treated with formalin three times a week at 1,667 ppm to prevent fungal growth. This treatment was discontinued after the eggs were eyed and picked.

The eggs eyed up at 550 temperature units, at which time they were shocked and picked. A Jensorter egg picker and counter were utilized to determine the total number on hand, eye-up percentage, and number of eggs remaining to hatch. An eye-up of 91.9% was obtained for Sawtooth eggs and 90.8% for the East Fork, leaving 1,870,306 Sawtooth and 272,781 East Fork eggs to hatch (Table 4). The eyed eggs were then measured back into the incubators at 85 ounces per tray to hatch. Hatching began at 900 temperature units.

An additional 705,091 Rapid River Hatchery and 318,818 Pahsimeroi eggs were received for rearing. They eyed-up at 88.2% and 85.4%, respectively, leaving 622,030 Rapid River and 272,280 Pahsimeroi eggs to hatch (Table 4).

Table 4. 1986 brood year chinook survival from green eggs to released smolts.

Green egg number	Eyed egg number	Percent survival	500 per lb. no.	Percent survival	Released smolts	Percent survival
			Sawtooth fish			
2,035,535	1,870,306	91.9	1,821,872	89.5	1,705,500	83.7
			East Fork fish			
300,438	272,781	90.8	265,557	88.4	249,200	82.9

CHINOOK FRY

The swim-up chinook fry were moved to the indoor rearing vats at approximately 1,650 temperature units-. Fry were placed into the vats at 200,000 fish per vat in 90 cubic feet of rearing space. Initial feeding was begun with OMP IV starter mash and 1/32-inch OMP IV. Mash was used for three days, mixed with 1/32-inch for seven days, then the fry were fed entirely 1/32-inch until they reached 400 fish per pound.

Two vats, one Sawtooth stock and one Rapid River stock, were used in a diet test to determine growth rates, "spring thing" mortality, frayed fins, etc. (McGehee Feed Study 1987).

Rearing densities were adjusted by increasing the rearing space as fish requirements demanded. Density indexes ranged from .31 to .88 during **vat** rearing.

The fry grew at a rate of .380 inches (.965 mm) per month. When they reached 400 fish per pound, the 1/32-inch feed was mixed 50% with 3/64-inch OMP IV for 7 days, then switched to 100% 3/64-inch.

All OMP IV starter mash, 1/32-inch, and 3/64-inch feed were enhanced with 10 times the normal amount of pantothenic acid to help prevent "spring thing" mortality.

Chinook fry mortality was minimal up to the first week in April 1987. "Spring thing" mortality then became apparent in all stocks of fish on hand, with daily mortality increasing from 20 fish per vat to as high as 700 fish per vat. By May 1987, mortality was 5.3% for indoor rearing fry, at which time mortality began to drop off. The remaining fish

numbered 2,581,157 for all stocks. We planted 157,000 of the Rapid River stock in the Yankee Fork for a density study conducted by Fish and Game and the Shoshone-Bannock tribal biologist. These fry were then monitored throughout the summer and fall of 1987 for density and movement in the stream.

CHINOOK FINGERLINGS

Indoor rearing fish were moved to the outside raceways beginning on March 26, 1987, and the last lot was moved out on May 20, 1987. The fish averaged 250 per pound when moved and were ponded at 200,000 fish per raceway. They were put into 2,700 cubic feet of rearing space, with the water flow set at 1.5 cfs per raceway. The density index was kept below .37 for the remaining rearing.

The fingerling chinook were fed 1/16-inch OMP IV when they reached 175 fish per pound, then 3/32-inch OMP IV at 100 fish per pound, mixing feed sizes for one week when switching to the larger feed size. OMP IV 1/8-inch was fed from 50 fish per pound until released or planted. Water flows were increased from 1.5 to 2.5 cfs during July 1987 through October 1987, then decreased to 1.5 cfs through the remaining rearing period.

In June of 1987, 12 of the 14 raceways were fed medicated feed, utilizing Gallimycin 50 at a dosage rate of 4.5 g active erythromycin per 100 pounds of fish weight. This prophylactic treatment for kidney disease lasted 21 days. Two raceways of fish were fed untreated feed and used as control groups to test the effectiveness of the treatment. The results were quite dramatic by the end of the hatchery rearing cycle, with mortality rates 12 to 13 times greater in the untreated groups (Coonts, Erythromycin Feeding for Prevention of BKD, 1988).

In June 1987, some abnormal swimming behavior was noted in the East Fork fingerlings. The Idaho Fish and Game pathologist was notified, and a subsequent diagnosis of whirling disease was reported. Although all stocks of chinook were affected, no mortality was observed from this disease.

CHINOOK SMOLTS

In February 1988, all stocks of the 1986 brood year chinook smolts were examined by a Fish and Game pathologist. The smolts were generally in good condition using the Goede and Houghton (1985) Autopsy-Based Fish Health/Condition Assessment System.

FAT results for BKD indicated 95% negative and 5% light-positive smolts for erythromycin groups. Untreated group results indicated 82% negative and 18% heavy positive for BKD.

On March 15, 1988, the screens and boards were pulled on the Sawtooth stock, releasing 1,604,900 smolts below the fish weir. On October 6, 1987, 100,600 presmolts were released to evaluate the results of a fall release. The fall-released fish averaged 23 fish per pound, while the spring release averaged 20.5 fish per pound.

East Fork smolts were planted from March 13 through March 18, 1988 with a total of 249,200 released, averaging 19.5 fish per pound.

The Rapid River stock were planted in the Yankee Fork from March 14 to March 18, 1988. A total of 725,300 fish averaging 20.1/pound were planted at the bridge at the mouth of the West Fork of the Yankee Fork.

PRODUCTION COSTS

The cost of producing the chinook smolts at both the Sawtooth and East Fork facilities are summarized in Table 5. An overall conversion rate of 1.5 was attained on all three groups of chinook during the rearing period.

Table 5. 1986 brood year spring chinook production costs.

Lbs. of fish produced	Lbs. of feed fed	Feed cost	Conversion	Cost per lb. produced
131,461	193,788	$93,635	1.5	$ 7

Sawtooth		East Fork	
Personnel costs	$214,193	Personnel costs	$30,000
Operating costs	372,400	Operating costs	16,235
Capital outlay	15,000	Capital outlay	15,051
Program total[a]	$601,593	Program total	$61,286

[a]Cost estimated for entire 18-month rearing cycle.

Sawtooth Fish Hatchery and East Fork Satellite

1987 Steelhead Brood Year Report

1987 ADULT STEELHEAD RETURNS

The 1987 steelhead adult returns were from 681,314 smolts released in 1984 and 784,096 smolts released in 1985, reared and planted by Hagerman National Hatchery and Magic Valley Hatchery (Table 6). Some returns were also from natural spawning fish.

The Sawtooth fish trap was installed on March 7, 1987 and was operated through May 1, 1987. A total of 2,187 adult steelhead were trapped (Figure 1). This total included 1,074 males and 1,113 females. These fish consisted of 1,647 one-ocean A's and 540 two-ocean A's (Table 8). The following criteria was used for determining age groups.

Males: one-ocean A's were 69 cm (27 inches) or less; two-ocean A's were 71 cm (28 inches) and longer;

Females: one-ocean A's were 64 cm {25 inches) or less; two-ocean A's were 66 cm (26 inches) and longer.

At least one-third of the fish, by sex, were released to spawn naturally. Seventy-three of the released steelhead were "wild or natural" fish.

The 1987 East Fork steelhead returns were from 324,325 smolts released in 1983, 393,452 smolts released in 1984, and 270,208 smolts released in 1985 reared and planted by Hagerman National Hatchery and Magic Valley Hatchery (Table 6). Some returns were also from natural spawning fish.

The East Fork fish trap and velocity barrier was put into operation on March 12, 1987 and was operated through April 30, 1987. A total of 224 adult steelhead were trapped (Figure 2), including 88 males and 136 females.. These fish consisted of 60 one-ocean B's and 164 two-ocean B's (Table 8). At least one-third of the fish, by sex, were released to spawn naturally, and 14 of the released steelhead were "wild or natural" fish.

Table 6. Steelhead smolt releases to bring back 1987 adults.

Date released	Hatchery rearing	Number	Marks	Stock
		Sawtooth		
1984	HNFH	40,322	51029	A
1984	HNFH	39,763	51028	A
1984	HNFH	397,079	None	A
1984	MV	204,150	None	A
1985	HNFH	40,475	102630 LV	A
1985	HNFH	35,125	RD-Y-1	A
1985	HNFH	708,496	None	A
Total		1,465,410		
		East Fork		
1983	HNFH	31,348	LV	A
1983	HNFH	38,864	102460	B
1983	MV	49,140	None	B
1983	HNFH	162,723	None	B
1983	NIA. SPR.	42,250	None	B
1984	HNFH	393,452	None	B
1985	HNFH	39,375	102631 LV	B
1985	HNFH	35,225	102636 LV	B
1985	HNFH	17,425	102555 LV	B
1985	HNFH	16,950	102803 LV	B
1985	HNFH	8,100	102802 LV	B
1985	HNFH	25,525	102854 LV	B
1985	HNFH	31,775	RD-Y-3	B
1985	HNFH	95,833	None	B
Total		987,985		

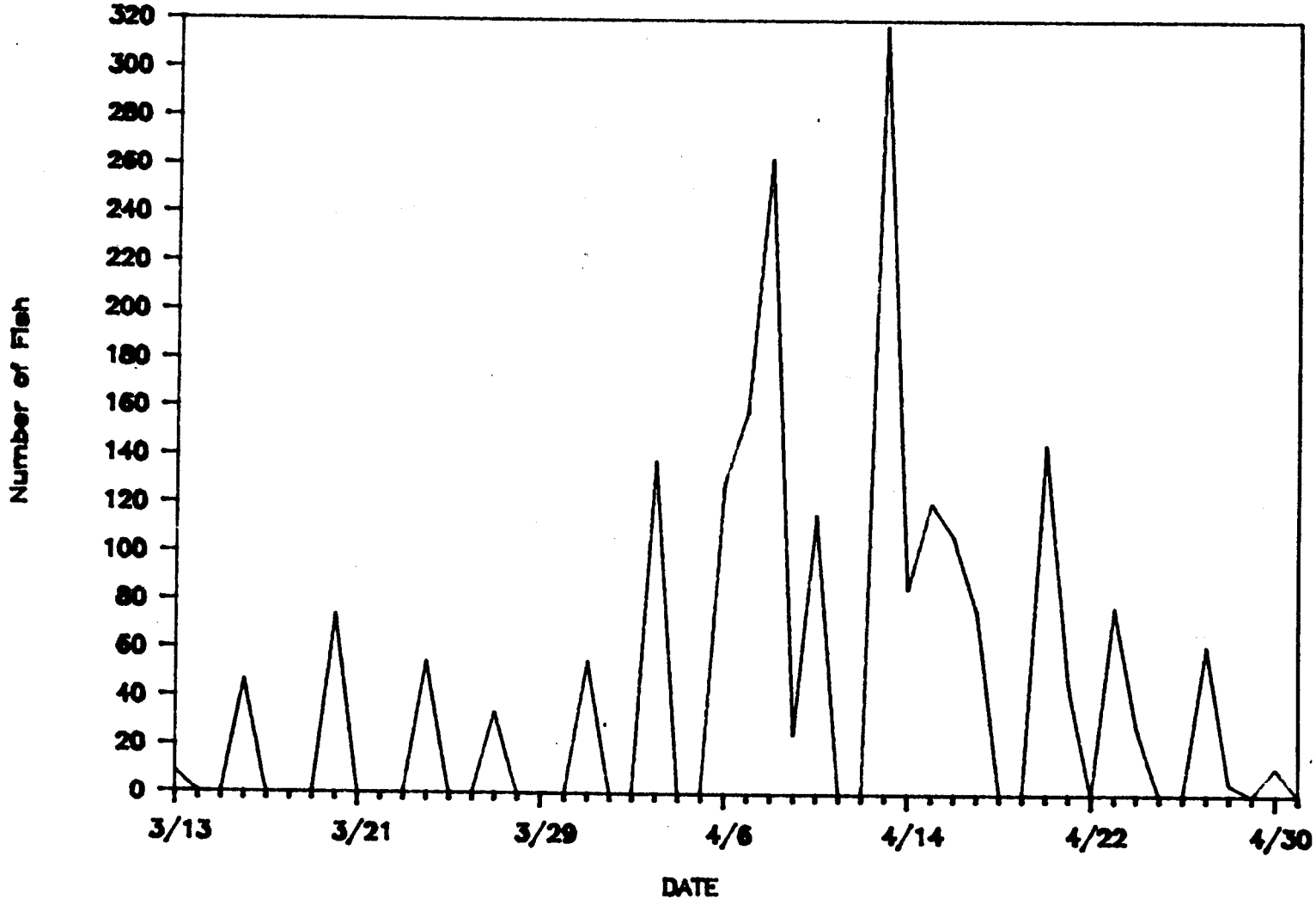


Figure 1. Run timing of adult steelhead, Sawtooth, 1987.

Table 7. Length frequency distribution of Sawtooth steelhead, 1987.

Length (cm)	Males	Female	Fish trapped	Length (in)
50	28	23	51	20
53	82	76	158	21
55	131	132	263	22
58	252	198	450	23
60	250	162	412	24
63	163	78	241	25
66	56	57	113	26
68	16	88	104	27
71	25	97	122	28
73	36	119	155	29
76	23	44	67	30
78	5	20	25	31
81	5	11	16	32
83	1	6	7	33
86	0	1	1	34
88	1	1	2	35
Totals	1,074	1,113	2,187	

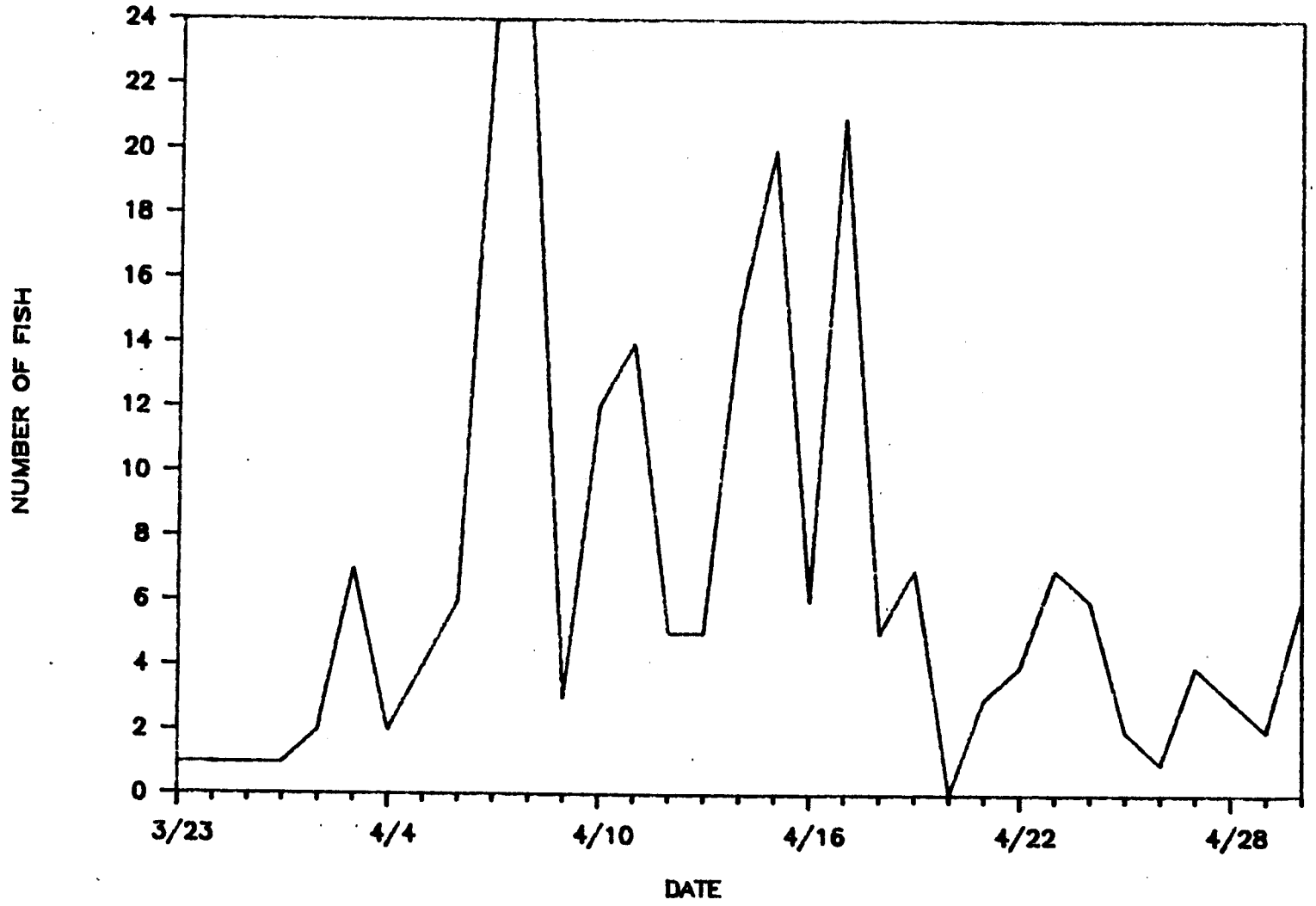


Figure 2. Run timing of adult chinook, Sawtooth, 1986.

Table 8. Length frequency distribution of East Fork steelhead, 1987.

Length (cm)	Males	Females	Fish trapped	Length (in.)
55	1	0	1	22
58	0	2	2	23
60	4	9	13	24
63	14	8	22	25
66	10	4	14	26
68	4	1	5	27
71	3	6	9	28
73	2	8	10	29
76	3	16	19	30
78	5	25	30	31
81	12	27	39	32
83	14	21	35	33
86	13	8	21	34
88	3	1	4	35
Totals	88	136	224	

ADULT STEELHEAD CODED WIRE TAG RECOVERIES

Adult steelhead were examined for fin clips and tags. Table 9 summarizes coded wire tag recovery data. Additionally, two fish trapped at Sawtooth had been tagged at Lower Granite Dam, and one adult returned from a smolt release at the East Fork of the Salmon River. Also, one adult trapped at the East Fork returned from a mark group that had been released at Sawtooth Hatchery.

Table 9. Sawtooth and East Fork coded wire tag recoveries from adult steelhead.

Tag code	Brood year	Release year	Tags released	Tags recovered	Group release
			East Fork		
102631	1984	1985	39,375	10	270,208
102636	1984	1985	35,225	5	(same)
102854	1984	1985	25,525	3	(same)
			Sawtooth		
51028	1983	1984	38,775	1	681,314
51029	1983	1984	6,800	3	(same)
102630	1984	1985	40,475	51	784,096
Totals			216,175	73	1,735,618

STEELHEAD SPAWNING

Spawning operations began at Sawtooth on March 24, 1987 and continued through April 28, 1987. A total of 3,504,400 "A" eggs were taken from 722 females in 12 spawning days. Fecundity was 4,854 eggs per female.

The East Fork spawning operation began on March 23, 1987 and continued through April 27, 1987. A total of 445,400 "B" eggs were taken from 87 females in seven spawning days. Fecundity was 5,120 eggs per female.

Eggs were taken into a colander to drain off the ovarian fluid, then placed into a spawning bucket. Eggs from each female were fertilized by the sperm of one male. Fertilized eggs of two females were combined and rinsed with well water. Eggs were then allowed to water harden in a 200 ppm Argentine solution for one hour, then were shipped to the incubation facility at Sawtooth Hatchery. Eggs transported from the East Fork were placed in coolers containing water and ice, maintaining the temperature at approximately 40 degrees F.

All adults spawned for Hagerman National's eggs were sampled and tested for IHN and IPN viruses. Ovarian fluid was collected from the females and spleen samples from the males. Samples were sent to Dworshak lab for testing. Eggs from all adults that tested positive were destroyed. Samples from Sawtooth fish showed four females and five males tested positive for IHN virus; all fish tested negative for IPN virus. Samples from the East Fork showed two females tested positive for IHN virus, and two males tested positive for IPN virus.

A 60 fish sample was also tested for VEN virus, R. salmoninarum, Y. rukeri, A. salmonicida, M. cerebralis, and C. shasta. These tests were done by the Idaho Fish and Game pathology lab. A 19 fish sample was tested for the same pathogens. All samples were negative for R. salmoninarum, Y. rukeri,'and A. salmonicida; no report was received on the other pathogens.

FISH DISPOSITION

.One thousand one hundred fifty-four Sawtooth steelhead kelts were given to the public, 979 fish were released to spawn naturally, and the remaining 54 were buried (Appendix 4).

One hundred ten East Fork steelhead kelts were given to the public, 111 fish were released to spawn naturally, and three were buried (Appendix 4).

STEELHEAD EGGS

After water hardening, the Sawtooth eggs were put into incubators at 35 ounces per tray (approximately 8,000 eggs) to eye for A's'and 35 ounces per tray (approximately 6,750 eggs) to eye for B's. After 72 hours, Sawtooth and East Fork eggs were treated with formalin at a rate of 1,667 ppm in a 15 minute drip, three times a week, until eye-up. Pahsimeroi eggs were treated daily with the same concentration. By treating the Pahsimeroi eggs every day, shelled eggs were not a problem clogging up the egg picker. The eggs eyed-up at 350 temperature units, at which time they were shocked and picked. Eyed eggs were then shipped to Hagerman National Hatchery, Magic Valley Hatchery, or put back into the incubators at 8,000 eggs for A's and 6,750 for B's to hatch for fry plants.

After eye-up, we shipped 1,599,352 Sawtooth "A" eggs and 342,277 East Fork "B" eggs to Hagerman National Hatchery for rearing. Additionally, 922,250 Sawtooth "A" eggs and 1,194,526 Pahsimeroi "A" swim-up fry were shipped to Magic Valley for rearing and 368,480 Pahsimeroi "A" swim-up fry were shipped to Niagara Springs Hatchery. We hatched and planted 372,739 Sawtooth "A" fry and 559,026 Pahsimeroi "A" fry into the upper Salmon River tributaries. The fry plants were completed by July 8, 1987. Also, 10,122 eyed eggs were shipped to Hagerman National Nutritional Lab for use in a nutritional study.

SURVIVAL TO EYED EGG STAGE

A total of 2,908,631 eyed "A" eggs survived from the 3,388,226 green eggs taken at Sawtooth for an 85.82 eye-up, while 342,277 eyed "B" eggs taken at the East Fork survived for an eye-up of 76.4%.

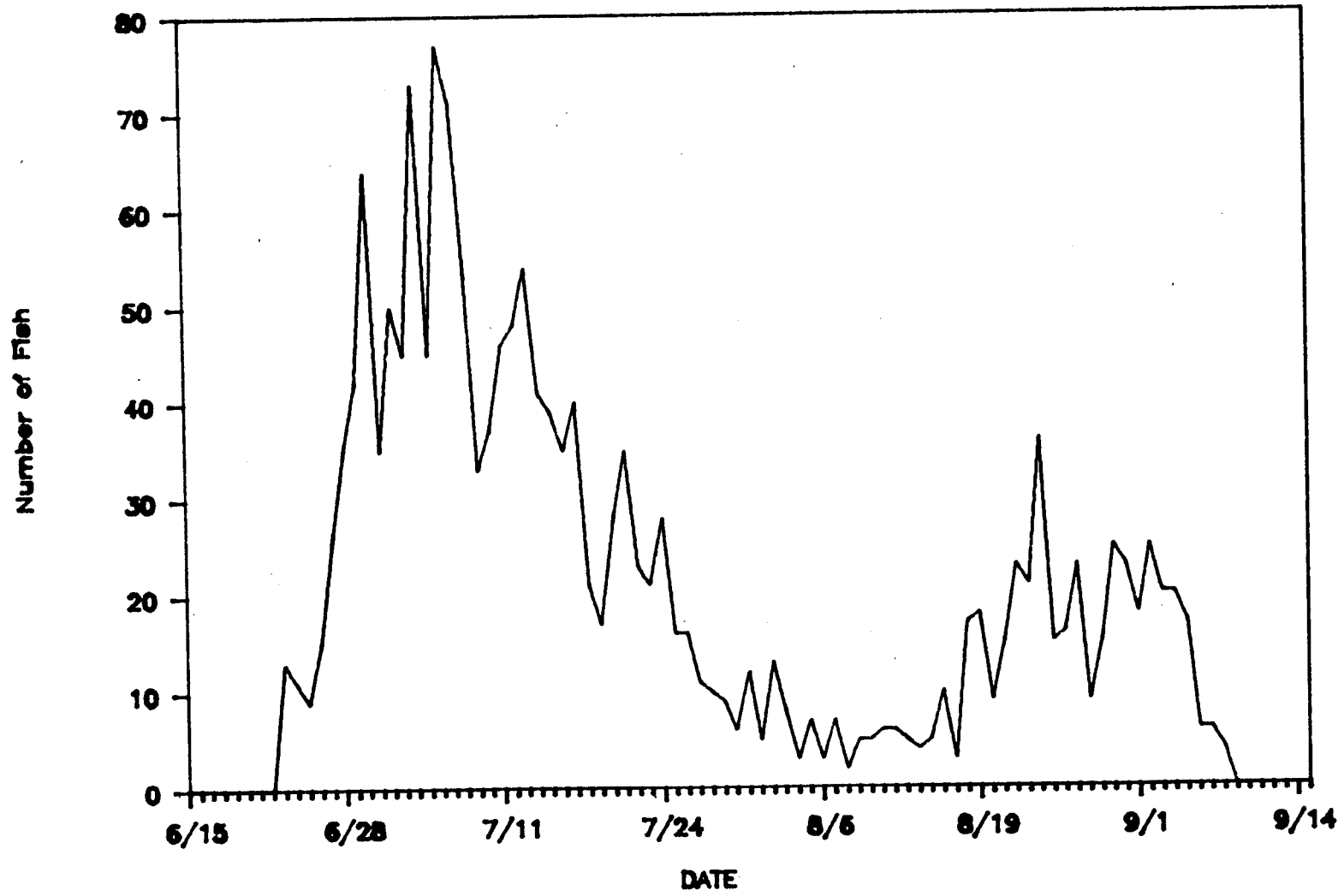
SMOLTS PLANTED

Hagerman National Hatchery began planting the 1987 brood year smolts at Sawtooth on April 4, 1988 and at the East Fork on April 4, 1988 and completed the operation on April 25, 1988. Sawtooth received 1,195,700 "A" smolts, which averaged 4.62 fish per pound or 271,110 pounds. The East Fork received 303,600 "B" smolts, which averaged 4.82 fish per pound or 62,965 pounds. The survival rate from eyed eggs to smolt release was 782 for Sawtooth A's and 88% for East Fork B's. Magic Valley planted a total of 57,700 steelhead at Sawtooth on April 6 and 9, 1988. Released smolts at Sawtooth totaled 1,253,400 steelhead A's, and the East Fork received 303,600 "B" smolts.

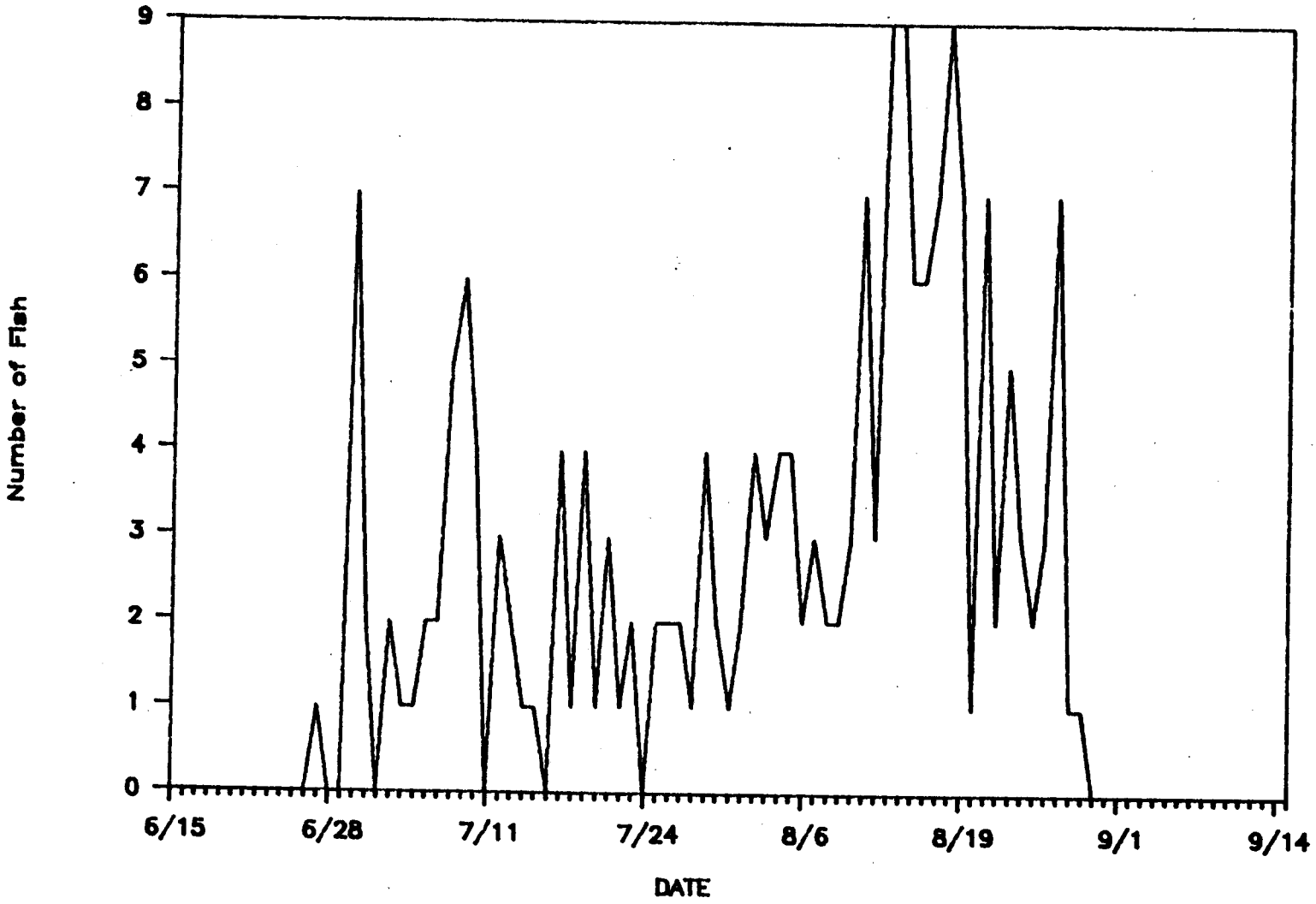
A P P E N D I C E S

Appendix 1. Sawtooth stock Summary of Normals using the Autopsy-Based Fish Health/Condition Assessment System (Goede and Houghton 1984).

Eyes:	100%
Gills:	100%
Pseudobranchs:	100%
Thymus:	100%
Mesentery Fat:	3-95% (3 = greater than 50% coverage)
Spleen:	100%
Hind Gut:	100%
Kidney:	100%
Liver:	93%
Bile:	0-100% (0 = full bladder)
Remarks:	Fins -- larger fish with eroded pectorals



Appendix 2. Run timing of adult chinook, Sawtooth, 1986.



Appendix 3. Run timing of adult chinook, East Fork, 1986.

Appendix 4. Summary of fish trapped, spawned, fish released, kelt disposition, for steelhead at Sawtooth and East Fork facilities, 1987.

Steelhead: Sawtooth Hatchery

Fish trapped:	2,187	Fish disposal:	
One-ocean A's:	1,647	Given to the public:	1,154
Two-ocean A's:	505	Released:	979
Total trapped	2,187	Buried:	54
		Total	2,187

Fish disposition:

Females:	730	spawned and given to the public
	383	released to spawn naturally
	1,113	Total
Males	424	Spawned and given to the public
	54	Spawned and buried
	596	Released or spawned and released
Males:	1,074	Total

Steelhead: East Fork

Fish trapped:	224	Fish disposal:	
One-ocean, B's	60	Given to the public:	110
Two-ocean B's	164	Released:	111
Total trapped	224	Buried:	3
		Total	224

Fish disposition:

Females:	84	spawned and given to the public
	49	released to spawn naturally
	3	spawned and buried
	136	Total
Males:	26	spawned (given to the public)
	62	released to spawn naturally
	88	Total

Appendix 5. East Fork satellite smolt release and adult return, 1986.

Brood year	Release year	Number released	Adult returns			Total returns[a]	Percent
			Jacks	2-ocean	3-ocean		
1979	1981	0[a]			69	69	INC[b]
1980	1982	0[a]		26	59	85	INC[b]
1981	1983	0[a]	22	193	102	317	INC[b]
1982	1984	0[a]	51	87	181	319	INC[b]
1983	1985	0[a]	5	90			
1984	1986	108,690	1				
1985	1987	195,100					
1986	1988	249,200					

[a]lncludes remnant population of wild fish.
[b]INC incomplete, or no releases.

Submitted by:

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